

ABSTRACT OF THE DISCLOSURE

Disclosed is a friction sheet welding method using a probe for joining two work pieces. The method comprises the steps of producing forcible and intense plastic deformation at surfaces of the work pieces while generating frictional heat at the surfaces by rotating the probe at a high speed, joining the work pieces together as the plastic deformation produced at the surfaces of the work pieces permeates inside material of the work pieces, and continuously welding the work pieces by horizontally traversing the probe along a weld joint between the work pieces. Differently from existing friction stir welding, according to the present invention, the generation of plastic flow is caused only by surface friction of the probe against the work pieces since it eliminates the use of a probe pin, and the generated plastic flow permeates inside the work pieces thus causing the work pieces to be joined